

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. - 14. (cancelled)

15. (new) An information recording medium on which one or a plurality of titles, each of which is a logically-grouped information unit, are recorded, said information recording medium comprising:

an object data file for storing object data which constitutes a series of content information;

a play list information file for storing a plurality of play list information which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and

a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii) Pre command information which indicates a command to be executed before the reproduction based on the one play list information, and (iii) Post command

information which indicates a command to be executed after the reproduction based on the one play list information,

the title being logically comprising one or more than one of the plurality of information groups,

the Pre command information and the Post command information including a command table on which a command group comprising zero, one or more statements are written,

the Pre command information including a Pre command pointer which is written separately from the command table and which specifies the address of the command to be executed before the reproduction included in the command table,

the Post command information including a Post command pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table,

the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer.

16. (new)The information recording medium according to claim 15, wherein the object data is constructed such that an entire stream including a plurality of portion streams, each of which comprises the content information, is multiplexed by a unit of packet, which is a physically accessible unit and which stores therein a piece of the content information,

said information recording medium further comprising an object information file for storing correspondence definition information which defines the correspondence relationship between a plurality of packets to be multiplexed and the plurality of portion streams as another reproduction control information for controlling the reproduction of said object data file.

17. (new)The information recording medium according to claim 16, wherein

said play list information file is collectively recorded in one area on said information recording medium,

said disc information file is collectively recorded in another area on said information recording medium, and

said object information file is collectively recorded in another area on said information recording medium.

18. (new)The information recording medium according to claim 15, wherein

said play list information file is collectively recorded in one area on said information recording medium, and

said disc information file is collectively recorded in another area on said information recording medium.

19. (new)An information recording apparatus for recording one or a plurality of titles, each of which is a

logically-grouped information unit, onto an information recording medium,

said information recording apparatus comprising:

a first recording device for recording an object data file for storing object data which constitutes a series of content information;

a second recording device for recording a play list information file for storing a plurality of play list information which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and

a third recording device for recording a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii) Pre command information which indicates a command to be executed before the reproduction based on the one play list information, and (iii) Post command information which indicates a command to be executed after the reproduction based on the one play list information,

the title being logically comprising one or more than one of the information groups,

the Pre command information and the Post command information including a command table on which a command group comprising zero, one or more statements are written,

the Pre command information including a Pre command pointer which is written separately from the command table and which specifies the address of the command to be executed before the reproduction included in the command table,

the Post command information including a Post command pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table,

the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer.

20. (new)An information recording method of recording one or a plurality of titles, each of which is a logically-grouped information unit, onto an information recording medium,

said information recording method comprising:

a first recording process of recording an object data file for storing object data which constitutes a series of content information;

a second recording process of recording a play list information file for storing a plurality of play list information

which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and

a third recording process of recording a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii) Pre command information which indicates a command to be executed before the reproduction based on the one play list information, and (iii) Post command information which indicates a command to be executed after the reproduction based on the one play list information,

the title being logically comprising one or more than one of the information groups,

the Pre command information and the Post command information including a command table on which a command group comprising zero, one or more statements are written,

the Pre command information including a Pre command pointer which is written separately from the command table and which specifies the address of the command to be executed before the reproduction included in the command table,

the Post command information including a Post command

pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table,

the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer.

21. (new)An information reproducing apparatus for reproducing at least one portion of recorded titles from an information recording medium on which one or the plurality of titles, each of which is a logically-grouped information unit, are recorded, said information recording medium comprising: an object data file for storing object data which constitutes a series of content information; a play list information file for storing a plurality of play list information which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii) Pre command information which indicates a command to be executed

before the reproduction based on the one play list information, and (iii) Post command information which indicates a command to be executed after the reproduction based on the one play list information, the title being logically comprising one or more than one of the plurality of information groups, the Pre command information and the Post command information including a command table on which a command group comprising zero, one or more statements are written, the Pre command information including a Pre command pointer which is written separately from the command table and which specifies the address of the command to be executed before the reproduction included in the command table, the Post command information including a Post command pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table, the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer,

said information reproducing apparatus comprising:

a reading device for physically reading information from said information recording medium; and

a reproducing device for reproducing the object data included in the information read by said reading device, on the basis of the reproduction control information and the play list information included in the information read by said reading



device.

22. (new)An information reproducing method of reproducing at least one portion of recorded titles from an information recording medium on which one or the plurality of titles, each of which is a logically-grouped information unit, are recorded, said information recording medium comprising: an object data file for storing object data which constitutes a series of content information; a play list information file for storing a plurality of play list information which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii) Pre command information which indicates a command to be executed before the reproduction based on the one play list information, and (iii) Post command information which indicates a command to be executed after the reproduction based on the one play list information, the title being logically comprising one or more than one of the plurality of information groups, the Pre command information and the Post command information including a command

table on which a command group comprising zero, one or more statements are written, the Pre command information including a Pre command pointer which is written separately from the command table and which specifies the address of the command to be executed before the reproduction included in the command table, the Post command information including a Post command pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table, the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer,

said information reproducing method comprising:

a reading process of physically reading information from said information recording medium; and

a reproducing process of reproducing the object data included in the information read by said reading device, on the basis of the reproduction control information and the play list information included in the information read by said reading device.

23. (new)An information recording and reproducing apparatus for recording one or a plurality of titles onto and reproducing at least one portion of the recorded titles from an information recording medium on which one or the plurality of

titles, each of which is a logically-grouped information unit, are recorded, said information recording medium comprising: an object data file for storing object data which constitutes a series of content information; a play list information file for storing a plurality of play list information which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii) Pre command information which indicates a command to be executed before the reproduction based on the one play list information, and (iii) Post command information which indicates a command to be executed after the reproduction based on the one play list information, the title being logically comprising one or more than one of the plurality of information groups, the Pre command information and the Post command information including a command table on which a command group comprising zero, one or more statements are written, the Pre command information including a Pre command pointer which is written separately from the command table and which specifies the address of the command to be executed before the reproduction included in the command table,

the Post command information including a Post command pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table, the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer,

said information recording and reproducing apparatus comprising:

a first recording device for recording the object data file;

a second recording device for recording the play list information file;

a third recording device for recording the disc information file;

a reading device for physically reading information from said information recording medium; and

a reproducing device for reproducing the object data included in the information read by said reading device, on the basis of the reproduction control information and the play list information included in the information read by said reading device.

24. (new)An information recording and reproducing method of recording one or a plurality of titles onto and reproducing at

least one portion of the recorded titles from an information recording medium on which one or the plurality of titles, each of which is a logically-grouped information unit, are recorded, said information recording medium comprising: an object data file for storing object data which constitutes a series of content information; a play list information file for storing a plurality of play list information which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii) Pre command information which indicates a command to be executed before the reproduction based on the one play list information, and (iii) Post command information which indicates a command to be executed after the reproduction based on the one play list information, the title being logically comprising one or more than one of the plurality of information groups, the Pre command information and the Post command information including a command table on which a command group comprising zero, one or more statements are written, the Pre command information including a Pre command pointer which is written separately from the command

table and which specifies the address of the command to be executed before the reproduction included in the command table, the Post command information including a Post command pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table, the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer,

said information recording and reproducing method comprising:

a first recording process of recording the object data file;

a second recording process of recording the play list information file;

a third recording process of recording the disc information file;

a reading process of physically reading information from the information recording medium; and

a reproducing process of reproducing the object data included in the information read by said reading device, on the basis of the reproduction control information and the play list information included in the information read by said reading device.

25. (new)A computer program product for controlling record and for tangibly embodying a program of instructions executable by a computer to make the computer function as at least one portion of a first recording device, a second recording device, and a third recording device,

the computer being provided in an information recording apparatus for recording one or a plurality of titles, each of which is a logically-grouped information unit, onto an information recording medium,

said information recording apparatus comprising:

said first reading device for recording an object data file for storing object data which constitutes a series of content information;

said second recording device for recording a play list information file for storing a plurality of play list information which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and

said third recording device for recording a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii)

Pre command information which indicates a command to be executed before the reproduction based on the one play list information, and (iii) Post command information which indicates a command to be executed after the reproduction based on the one play list information,

the title being logically comprising one or more than one of the information groups,

the Pre command information and the Post command information including a command table on which a command group comprising zero, one or more statements are written,

the Pre command information including a Pre command pointer which is written separately from the command table and which specifies the address of the command to be executed before the reproduction included in the command table,

the Post command information including a Post command pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table,

the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer.

26. (new) A computer program product for controlling reproduction and for tangibly embodying a program of



instructions executable by a computer to make the computer function as at least one portion of a reading device and a reproducing device,

the computer being provided in An information reproducing apparatus for reproducing at least one portion of recorded titles from an information recording medium on which one or the plurality of titles, each of which is a logically-grouped information unit, are recorded, said information recording medium comprising: an object data file for storing object data which constitutes a series of content information; a play list information file for storing a plurality of play list information which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii) Pre command information which indicates a command to be executed before the reproduction based on the one play list information, and (iii) Post command information which indicates a command to be executed after the reproduction based on the one play list information, the title being logically comprising one or more than one of the plurality

of information groups, the Pre command information and the Post command information including a command table on which a command group comprising zero, one or more statements are written, the Pre command information including a Pre command pointer which is written separately from the command table and which specifies the address of the command to be executed before the reproduction included in the command table, the Post command information including a Post command pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table, the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer,

said information reproducing apparatus comprising:

said reading device for physically reading information from said information recording medium; and

said reproducing device for reproducing the object data included in the information read by said reading device, on the basis of the reproduction control information and the play list information included in the information read by said reading device.

27. (new)A computer program product for controlling record and reproduction and for tangibly embodying a program of

instructions executable by a computer to make the computer function as at least one portion of a first recording device, a second recording device, a third recording device, a reading device, and a reproducing device,

the computer being provided in An information recording and reproducing apparatus for recording one or a plurality of titles onto and reproducing at least one portion of the recorded titles from an information recording medium on which one or the plurality of titles, each of which is a logically-grouped information unit, are recorded, said information recording medium comprising: an object data file for storing object data which constitutes a series of content information; a play list information file for storing a plurality of play list information which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii) Pre command information which indicates a command to be executed before the reproduction based on the one play list information, and (iii) Post command information which indicates a command to be executed after the

reproduction based on the one play list information, the title being logically comprising one or more than one of the plurality of information groups, the Pre command information and the Post command information including a command table on which a command group comprising zero, one or more statements are written, the Pre command information including a Pre command pointer which is written separately from the command table and which specifies the address of the command to be executed before the reproduction included in the command table, the Post command information including a Post command pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table, the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer,

said information recording and reproducing apparatus comprising:

said first recording device for recording the object data file;

said second recording device for recording the play list information file;

said third recording device for recording the disc information file;

said reading device for physically reading information

from said information recording medium; and

said reproducing device for reproducing the object data included in the information read by said reading device, on the basis of the reproduction control information and the play list information included in the information read by said reading device.

28. (new)A data structure including a control signal, which includes one or a plurality of titles, each of which is a logically-grouped information unit, said data structure comprising:

an object data file for storing object data which constitutes a series of content information;

a play list information file for storing a plurality of play list information which defines a reproduction sequence of the object data stored in said object data file by a unit of play list which is logically accessible; and

a disc information file for storing a plurality of information groups including, as reproduction control information for controlling the reproduction of said object data file, (i) play list specification information for specifying one play list information which defines the play list to be reproduced from among the plurality of play list information stored in said play list information file, (ii) Pre command information which indicates a command to be executed before the reproduction based

on the one play list information, and (iii) Post command information which indicates a command to be executed after the reproduction based on the one play list information,

the title being logically comprising one or more than one of the plurality of information groups,

the Pre command information and the Post command information including a command table on which a command group comprising zero, one or more statements are written,

the Pre command information including a Pre command pointer which is written separately from the command table and which specifies the address of the command to be executed before the reproduction included in the command table,

the Post command information including a Post command pointer which is written separately from the command table and which specifies the address of the command to be executed after the reproduction included in the command table,

the Pre command information and the Post command information including a command pointer which specifies the address of each of the Pre command pointer and the Post command pointer.